



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**In re Application of:**

Lund et al.

**Serial No.:** 10/727,093

**Filed:** December 2, 2003

**For:** METHOD AND APPARATUS FOR  
SUPPRESSION OF FIRES

**Confirmation No.:** Unknown

**Examiner:** Unknown

**Group Art Unit:** Unknown

**Attorney Docket No.:** 2507-6011US  
(22032-US)

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence along with any attachments referred to or identified as being attached or enclosed is being deposited with the United States Postal Service as First Class Mail on the date of deposit shown below with sufficient postage and in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

December 23, 2003  
Date

Signature

Deidra Pfeil

Name (Type/Print)

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In compliance with the duty to disclose information material to patentability pursuant to 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 or PTO/SB/08 be considered by the Examiner and made of record. Copies of the listed documents are enclosed pursuant to 37 C.F.R. § 1.98(a).

In accordance with 37 C.F.R. § 1.97(g) and (h), filing of this Information Disclosure Statement is not to be construed as a representation that a search has been made or an admission that the information cited herein is, or is considered to be, material to patentability as defined in

37 C.F.R. § 1.56(b). Further, no representation is made by Applicants herein that no other possible material information as defined in 37 C.F.R. § 1.56(b) exists.

| <u>U.S. Patent Documents</u> |                         |                    |
|------------------------------|-------------------------|--------------------|
| <u>U.S. Patent No.</u>       | <u>Publication Date</u> | <u>Patentee</u>    |
| US - 1,839,658               | 01/05/1932              | Dugas              |
| US - 2,841,227               | 07/01/1958              | Betzler            |
| US - 3,255,824               | 06/14/1966              | Rodgers            |
| US - 3,641,935               | 02/15/1972              | Gawlick et al.     |
| US - 3,741,585               | 06/26/1973              | Hendrickson et al. |
| US - 3,806,461               | 04/23/1974              | Hendrickson et al. |
| US - 3,972,820               | 08/03/1976              | Filter et al.      |
| US - 4,064,944               | 12/27/1977              | McClure et al.     |
| US - 4,224,994               | 09/30/1980              | Tone et al.        |
| US - 4,505,336               | 03/19/1985              | Thevis et al.      |
| US - 4,601,344               | 07/22/1986              | Reed, Jr. et al.   |
| US - 4,807,706               | 02/28/1989              | Lambertsen et al.  |
| US - 4,909,549               | 03/20/1990              | Poole et al.       |
| US - 4,931,111               | 06/05/1990              | Poole et al.       |
| US - 5,035,757               | 07/30/1991              | Poole              |
| US - 5,423,384               | 06/13/1995              | Galbraith et al.   |
| US - 5,425,886               | 06/20/1995              | Smith              |
| US - 5,429,691               | 07/04/1995              | Hinshaw et al.     |
| US - 5,439,537               | 08/08/1995              | Hinshaw et al.     |
| US - 5,441,114               | 08/15/1995              | Spector et al.     |
| US- 5,449,041                | 09/12/1995              | Galbraith          |
| US-5,495,893                 | 03/05/1996              | Roberts et al.     |
| US- 5,588,493                | 12/31/1996              | Spector et al.     |

**Serial No. 10/727,093**

|                     |            |                   |
|---------------------|------------|-------------------|
| US- 5,609,210       | 03/11/1997 | Galbraith et al.  |
| US- 5,613,562       | 03/25/1997 | Galbraith et al.  |
| US- 5,762,145       | 06/09/1998 | Bennett           |
| US- 5,845,716       | 12/08/1998 | Birk              |
| US- 5,957,210       | 09/28/1999 | Cohrt et al.      |
| US- 5,992,530       | 11/30/1999 | Sundholm          |
| US- 5,996,699       | 12/07/1999 | Sundholm          |
| US- 6,012,533       | 01/11/2000 | Cramer            |
| US- 6,016,874       | 01/25/2000 | Bennett           |
| US- 6,024,889       | 02/15/2000 | Holland et al.    |
| US- 6,039,820       | 03/21/2000 | Hinshaw et al.    |
| US- 6,045,637       | 04/04/2000 | Grzyl             |
| US- 6,086,693       | 07/11/2000 | Mendenhall et al. |
| US- 6,132,480       | 10/17/2000 | Barnes et al.     |
| US- 6,224,099 B1    | 05/01/2001 | Nielson et al.    |
| US- 6,257,341 B1    | 08/10/2001 | Bennett           |
| US- 6,314,754 B1    | 11/13/2001 | Kotliar           |
| US- 6,334,315 B1    | 01/01/2002 | Kotliar           |
| US- 2002/0020536 A1 | 02/21/2002 | Bennett           |
| US- 6,401,487 B1    | 06/11/2002 | Kotliar           |
| US- 6,418,752 B2    | 07/16/2002 | Kotliar           |
| US- 6,502,421 B2    | 01/07/2003 | Kotliar           |
| US- 6,557,374 B2    | 05/06/2003 | Kotliar           |
| US- 6,560,991 B1    | 05/13/2003 | Kotliar           |
| US- 6,599,380 B1    | 07/29/2003 | Zeuner et al.     |

Other Documents

"Water Mist-Fire-Suppression Experiment," NASA Glenn Research Center, Dec. 2001, 3 pages.

Applicants offer to supply any explanation or discussion of the documents that the Examiner feels is necessary or desirable and which is requested.

This Information Disclosure Statement is filed within three (3) months of the filing date of the above-identified application, and no certification pursuant to 37 C.F.R. § 1.97(c) or a fee pursuant to 37 C.F.R. § 1.17(p) is required.

Respectfully submitted,



Bradley B. Jensen  
Registration No. 46,801  
Attorney for Applicants  
TRASKBRITT  
P.O. Box 2550  
Salt Lake City, Utah 84110-2550  
Telephone: 801-532-1922

Date: December 23, 2003

BBJ/dlm:djp

Enclosures: Form PTO-1449 or PTO/SB/08  
Cited Documents

Document in ProLaw



PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 3

**Complete if Known**

|                        |                        |
|------------------------|------------------------|
| Application Number     | 10/727,093             |
| Filing Date            | December 2, 2003       |
| First Named Inventor   | Lund et al.            |
| Group Art Unit         | Unknown                |
| Examiner Name          | Unknown                |
| Attorney Docket Number | 2507-6011US (22032-US) |

**U.S. PATENT DOCUMENTS**

| Examiner<br>Initials * | Cite<br>No. <sup>1</sup> | Document Number                            | Publication Date<br>MM-DD-YYYY | Name of Patentee or Applicant of<br>Cited Document | Pages, Columns, Lines, Where Relevant<br>Passages or Relevant<br>Figures Appear |
|------------------------|--------------------------|--|--------------------------------|--|---|
|                        |                          | Number - Kind Code <sup>2</sup> (if known) |                                |  |   |
|                        |                          | US-1,839,658                               | 01/05/1932                     | Dugas  |   |
|                        |                          | US- 2,841,227                              | 07/01/1958                     | Betzler  |   |
|                        |                          | US- 3,255,824                              | 06/14/1966                     | Rodgers  |   |
|                        |                          | US- 3,641,935                              | 02/15/1972                     | Gawlick et al.                                     |   |
|                        |                          | US- 3,741,585                              | 06/26/1973                     | Hendrickson et al.                                 |   |
|                        |                          | US- 3,806,461                              | 04/23/1974                     | Hendrickson et al.                                 |   |
|                        |                          | US- 3,972,820                              | 08/03/1976                     | Filter et al.                                      |   |
|                        |                          | US- 4,064,944                              | 12/27/1977                     | McClure et al.                                     |   |
|                        |                          | US- 4,224,994                              | 09/30/1980                     | Tone et al.  |   |
|                        |                          | US- 4,505,336                              | 03/19/1985                     | Thevis et al.                                      |   |
|                        |                          | US- 4,601,344                              | 07/22/1986                     | Reed, Jr. et al.                                   |   |
|                        |                          | US- 4,807,706                              | 02/28/1989                     | Lambertsen et al.                                  |   |
|                        |                          | US- 4,909,549                              | 03/20/1990                     | Poole et al.                                       |   |
|                        |                          | US- 4,931,111                              | 06/05/1990                     | Poole et al.                                       |   |
|                        |                          | US- 5,035,757                              | 07/30/1991                     | Poole  |   |
|                        |                          | US- 5,423,384                              | 06/13/1995                     | Galbraith et al.                                   |   |
|                        |                          | US- 5,425,886                              | 06/20/1995                     | Smith  |   |
|                        |                          | US- 5,429,691                              | 07/04/1995                     | Hinshaw et al.                                     |   |
|                        |                          | US- 5,439,537                              | 08/08/1995                     | Hinshaw et al.                                     |   |
|                        |                          | US- 5,441,114                              | 08/15/1995                     | Spector et al.                                     |   |
|                        |                          | US- 5,449,041                              | 09/12/1995                     | Galbraith  |   |
|                        |                          | US- 5,495,893                              | 03/05/1996                     | Roberts et al.                                     |   |
|                        |                          | US- 5,588,493                              | 12/31/1996                     | Spector et al.                                     |   |
|                        |                          | US- 5,609,210                              | 03/11/1997                     | Galbraith et al.                                   |   |

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231.

DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.





PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 2 of 3

**Complete if Known**

|                        |                        |
|------------------------|------------------------|
| Application Number     | 10/727,093             |
| Filing Date            | December 2, 2003       |
| First Named Inventor   | Lund et al.            |
| Group Art Unit         | Unknown                |
| Examiner Name          | Unknown                |
| Attorney Docket Number | 2507-6011US (22032-US) |

**U.S. PATENT DOCUMENTS**

| Examiner<br>Initials * | Cite<br>No. <sup>1</sup> | Document Number                            | Publication Date<br>MM-DD-YYYY | Name of Patentee or Applicant of<br>Cited Document | Pages, Columns, Lines, Where Relevant<br>Passages or Relevant<br>Figures Appear |
|------------------------|--------------------------|--|--------------------------------|--|---|
|                        |                          | Number - Kind Code <sup>2</sup> (if known) |                                |  |   |
|                        |                          | US- 5,613,562                              | 03/25/1997                     | Galbraith et al.                                   |   |
|                        |                          | US- 5,762,145                              | 06/09/1998                     | Bennett  |   |
|                        |                          | US- 5,845,716                              | 12/08/1998                     | Birk   |   |
|                        |                          | US- 5,957,210                              | 09/28/1999                     | Cohrt et al.                                       |   |
|                        |                          | US- 5,992,530                              | 11/30/1999                     | Sundholm   |   |
|                        |                          | US- 5,996,699                              | 12/07/1999                     | Sundholm   |   |
|                        |                          | US- 6,012,533                              | 01/11/2000                     | Cramer   |   |
|                        |                          | US- 6,016,874                              | 01/25/2000                     | Bennett  |   |
|                        |                          | US- 6,024,889                              | 02/15/2000                     | Holland et al.                                     |   |
|                        |                          | US- 6,039,820                              | 03/21/2000                     | Hinshaw et al.                                     |   |
|                        |                          | US- 6,045,637                              | 04/04/2000                     | Grzyll   |   |
|                        |                          | US- 6,086,693                              | 07/11/2000                     | Mendenhall et al.                                  |   |
|                        |                          | US- 6,132,480                              | 10/17/2000                     | Barnes et al.                                      |   |
|                        |                          | US- 6,224,099 B1                           | 05/01/2001                     | Nielson et al.                                     |   |
|                        |                          | US- 6,257,341 B1                           | 08/10/2001                     | Bennett  |   |
|                        |                          | US- 6,314,754 B1                           | 11/13/2001                     | Kotliar  |   |
|                        |                          | US- 6,334,315 B1                           | 01/01/2002                     | Kotliar  |   |
|                        |                          | US- 2002/0020536 A1                        | 02/21/2002                     | Bennett  |   |
|                        |                          | US- 6,401,487 B1                           | 06/11/2002                     | Kotliar  |   |
|                        |                          | US- 6,418,752 B2                           | 07/16/2002                     | Kotliar  |   |
|                        |                          | US- 6,502,421 B2                           | 01/07/2003                     | Kotliar  |   |
|                        |                          | US- 6,557,374 B2                           | 05/06/2003                     | Kotliar  |   |
|                        |                          | US- 6,560,991 B1                           | 05/13/2003                     | Kotliar  |   |
|                        |                          | US- 6,599,380 A1                           | 07/29/2003                     | Zeuner et al.                                      |   |

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.





PTO/SB/08B(10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 3 of 3

**Complete if Known**

|                        |                        |
|------------------------|------------------------|
| Application Number     | 10/727,093             |
| Filing Date            | December 2, 2003       |
| First Named Inventor   | Lund et al.            |
| Group Art Unit         | Unknown                |
| Examiner Name          | Unknown                |
| Attorney Docket Number | 2507-6011US (22032-US) |

**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

| Examiner<br>Initials * | Cite<br>No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item<br>(book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher,<br>city and/or country where published. | T <sup>2</sup> |
|------------------------|--------------------------|---|----------------|
|                        |                          | "Water Mist-Fire-Suppression Experiment," NASA Glenn Research Center, Dec. 2001, 3 pages.   |                |
|                        |                          |   |                |
|                        |                          |   |                |
|                        |                          |   |                |
|                        |                          |   |                |
|                        |                          |   |                |
|                        |                          |   |                |
|                        |                          |   |                |
|                        |                          |   |                |
|                        |                          |   |                |
|                        |                          |   |                |

Examiner  
SignatureDate  
Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Washington, DC 20231.